

Claims

1. A device for separating a biological component, which comprises magnetically responsive particles and a chip obtained
5 by adhering a pair of substrates, which comprise one or multiple grooves formed on at least one surface thereof, with the groove(s) placed inside.
2. The device of claim 1, wherein said groove forms, within the
10 chip, at least one compartment and a flow passage communicating with the compartment.
3. The device of claim 2, wherein said groove has a protrusion protruding into the compartment.
- 15 4. The device of any of claims 1 to 3, wherein the biological component is a nucleic acid.
5. The device of claim 4, wherein the magnetically responsive
20 particles further comprise silica.
6. A method of separating a biological component from a liquid sample comprising the biological component, which uses a device of any of claims 1 to 3, and comprises the following steps (a) -
25 (d) :
 - (a) a step of holding the device such that the adhesion surface of the pair of substrates is about perpendicular to the horizontal direction,
 - (b) a step of adsorbing the biological component to magnetically
30 responsive particles by contacting the magnetically responsive particles with the liquid sample containing the biological component,
 - (c) a step of separating the magnetically responsive particles comprising the biological component adsorbed thereto from the

liquid sample, and

(d) a step of separating the biological component from the magnetically responsive particles.

5 7. The method of claim 6, wherein the magnetically responsive particles comprise ferromagnetic particles.

8. The method of claim 6 or 7, wherein the step (c) is performed by moving the magnetically responsive particles by application
10 of a magnetic field.

9. The method of any of claims 6 to 8, wherein the step (d) is performed by dissolving the biological component in a solvent.

15 10. The method of any of claims 6 to 9, wherein the step (d) comprises a step of separating the biological component from the magnetically responsive particles by applying an electric field.

11. The method of any of claims 6 to 10, wherein at least one of
20 the steps is automatically controlled.

12. The method of any of claims 6 to 11, wherein the biological component is a nucleic acid.

25 13. The method of claim 12, wherein the magnetically responsive particles further comprise silica.